



5820
TH
ENTERED

OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/980,054A

DATE: 12/04/2002 P.6
TIME: 10:27:05

Input Set : A:\19624051.app

Output Set: N:\CRF4\12032002\I980054A.raw

```

3 <110> APPLICANT: LALANNE, JEAN L
4   ROCHER, CORINNE
6 <120> TITLE OF INVENTION: Novel genes of Candida albicans and the proteins coded
7   by these genes
9 <130> FILE REFERENCE: 146.1374
11 <140> CURRENT APPLICATION NUMBER: 09/980,054A
C--> 12 <141> CURRENT FILING DATE: 2002-04-14
14 <150> PRIOR APPLICATION NUMBER: FR 9907250
15 <151> PRIOR FILING DATE: 1999-06-09
17 <150> PRIOR APPLICATION NUMBER: PCT/FR00/01567
18 <151> PRIOR FILING DATE: 2000-06-08
20 <160> NUMBER OF SEQ ID NOS: 32
22 <170> SOFTWARE: PatentIn Ver. 2.1
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 747
26 <212> TYPE: DNA
27 <213> ORGANISM: Candida albicans
29 <220> FEATURE:
30 <221> NAME/KEY: CDS
31 <222> LOCATION: (1)..(747)
33 <220> FEATURE:
34 <221> NAME/KEY: modified_base
35 <222> LOCATION: (136)..(138)
37 <400> SEQUENCE: 1
38 atg tca aat gac gat ata ata ctg cca tca gtt tca tcc tta tcg aaa      48
39 Met Ser Asn Asp Asp Ile Ile Leu Pro Ser Val Ser Ser Leu Ser Lys
40   1           5           10           15
42 cta act ata aat gat gta tca aaa tca gga ttt gga tac aat ccg tcc      96
43 Leu Thr Ile Asn Asp Val Ser Lys Ser Gly Phe Gly Tyr Asn Pro Ser
44   20           25           30
46 ata gga cca ata tca aat act att acc cta gaa tct tca ctg gta tta      144
47 Ile Gly Pro Ile Ser Asn Thr Ile Thr Leu Glu Ser Ser Leu Val Leu
48   35           40           45
50 tta aat aaa cgt aca ata tca tta aca cca aca tca tct gac tcc att      192
51 Leu Asn Lys Arg Thr Ile Ser Leu Thr Pro Thr Ser Ser Asp Ser Ile
52   50           55           60
54 tat gat aga aat att atc acg aaa aag cca cac gaa atc aac tta tct      240
55 Tyr Asp Arg Asn Ile Ile Thr Lys Lys Pro His Glu Ile Asn Leu Ser
56   65           70           75           80
58 tcg tta tca ttt ttg ttt tgt gag att att agt tgg gca cac tct aat      288
59 Ser Leu Ser Phe Leu Phe Cys Glu Ile Ile Ser Trp Ala His Ser Asn
60   85           90           95
62 tcc aaa ggc att caa gat tta gaa aat cgt tta aac gga tta ggt tat      336

```

RAW SEQUENCE LISTING

DATE: 12/04/2002

PATENT APPLICATION: US/09/980,054A

TIME: 10:27:05

Input Set : A:\19624051.app

Output Set: N:\CRF4\12032002\I980054A.raw

```

63 Ser Lys Gly Ile Gln Asp Leu Glu Asn Arg Leu Asn Gly Leu Gly Tyr
64      100      105      110
66 caa ata ggt caa cga tat ctc gaa ttg tgt aaa ata aga gaa ggt ttt 384
67 Gln Ile Gly Gln Arg Tyr Leu Glu Leu Cys Lys Ile Arg Glu Gly Phe
68      115      120      125
70 aaa aac agt aaa cga gag att aga ctt ttg gaa atg tta caa ttt att 432
71 Lys Asn Ser Lys Arg Glu Ile Arg Leu Leu Glu Met Leu Gln Phe Ile
72      130      135      140
74 cat ggt ccg ttc tgg aaa ttg att ttt ggt aaa act gct aat gaa tta 480
75 His Gly Pro Phe Trp Lys Leu Ile Phe Gly Lys Thr Ala Asn Glu Leu
76 145      150      155      160
78 gaa aaa tcg caa gat ttg ccc aat gaa tat atg att gtg gag aat gtg 528
79 Glu Lys Ser Gln Asp Leu Pro Asn Glu Tyr Met Ile Val Glu Asn Val
80      165      170      175
82 cca tta tta aat aga ttt att agt ata cct aag gag tat ggc gac tta 576
83 Pro Leu Leu Asn Arg Phe Ile Ser Ile Pro Lys Glu Tyr Gly Asp Leu
84      180      185      190
86 aat tgt tca gca ttt gtt gcg ggt ata att gag gga gca ctt gat aat 624
87 Asn Cys Ser Ala Phe Val Ala Gly Ile Ile Glu Gly Ala Leu Asp Asn
88      195      200      205
90 agt gga ttc aat gcc gat gtt aca gca cac acg gtc gct aca gat gca 672
91 Ser Gly Phe Asn Ala Asp Val Thr Ala His Thr Val Ala Thr Asp Ala
92      210      215      220
94 aat cca tta aga aca gta ttt ttg atc aag ttt gac gat tct gtt tta 720
95 Asn Pro Leu Arg Thr Val Phe Leu Ile Lys Phe Asp Asp Ser Val Leu
96 225      230      235      240
98 att aga gag agt ttg aga ttt gga taa 747
99 Ile Arg Glu Ser Leu Arg Phe Gly
100      245
103 <210> SEQ ID NO: 2
104 <211> LENGTH: 248
105 <212> TYPE: PRT
106 <213> ORGANISM: Candida albicans
108 <400> SEQUENCE: 2
109 Met Ser Asn Asp Asp Ile Ile Leu Pro Ser Val Ser Ser Leu Ser Lys
110 1      5      10      15
111 Leu Thr Ile Asn Asp Val Ser Lys Ser Gly Phe Gly Tyr Asn Pro Ser
112      20      25      30
113 Ile Gly Pro Ile Ser Asn Thr Ile Thr Leu Glu Ser Ser Leu Val Leu
114      35      40      45
115 Leu Asn Lys Arg Thr Ile Ser Leu Thr Pro Thr Ser Ser Asp Ser Ile
116      50      55      60
117 Tyr Asp Arg Asn Ile Ile Thr Lys Lys Pro His Glu Ile Asn Leu Ser
118 65      70      75      80
119 Ser Leu Ser Phe Leu Phe Cys Glu Ile Ile Ser Trp Ala His Ser Asn
120      85      90      95
121 Ser Lys Gly Ile Gln Asp Leu Glu Asn Arg Leu Asn Gly Leu Gly Tyr
122      100      105      110
123 Gln Ile Gly Gln Arg Tyr Leu Glu Leu Cys Lys Ile Arg Glu Gly Phe

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/980,054A

DATE: 12/04/2002

TIME: 10:27:05

Input Set : A:\19624051.app

Output Set: N:\CRF4\12032002\I980054A.raw

```

124          115          120          125
125 Lys Asn Ser Lys Arg Glu Ile Arg Leu Leu Glu Met Leu Gln Phe Ile
126          130          135          140
127 His Gly Pro Phe Trp Lys Leu Ile Phe Gly Lys Thr Ala Asn Glu Leu
128 145          150          155          160
129 Glu Lys Ser Gln Asp Leu Pro Asn Glu Tyr Met Ile Val Glu Asn Val
130          165          170          175
131 Pro Leu Leu Asn Arg Phe Ile Ser Ile Pro Lys Glu Tyr Gly Asp Leu
132          180          185          190
133 Asn Cys Ser Ala Phe Val Ala Gly Ile Ile Glu Gly Ala Leu Asp Asn
134          195          200          205
135 Ser Gly Phe Asn Ala Asp Val Thr Ala His Thr Val Ala Thr Asp Ala
136          210          215          220
137 Asn Pro Leu Arg Thr Val Phe Leu Ile Lys Phe Asp Asp Ser Val Leu
138 225          230          235          240
139 Ile Arg Glu Ser Leu Arg Phe Gly
140          245
144 <210> SEQ ID NO: 3
145 <211> LENGTH: 711
146 <212> TYPE: DNA
147 <213> ORGANISM: Candida albicans
149 <220> FEATURE:
150 <221> NAME/KEY: CDS
151 <222> LOCATION: (1)..(711)
153 <220> FEATURE:
154 <221> NAME/KEY: modified_base
155 <222> LOCATION: (577)..(579)
157 <400> SEQUENCE: 3
158 atg gat att gac gat att tta aaa gaa ttt gaa gag tct tca aaa gat 48
159 Met Asp Ile Asp Asp Ile Leu Lys Glu Phe Glu Glu Ser Ser Lys Asp
160 1 5 10 15
162 gaa aag att agc agt aaa aca tcg tct atc aac tta tat caa gac ttg 96
163 Glu Lys Ile Ser Lys Thr Ser Ser Ile Asn Leu Tyr Gln Asp Leu
164 20 25 30
166 cta aga gct atg atc aac gaa cgt atg gct ccg gaa tta ttg cca tac 144
167 Leu Arg Ala Met Ile Asn Glu Arg Met Ala Pro Glu Leu Leu Pro Tyr
168 35 40 45
170 aaa caa gat tta atg tcc act gtt tta aca atg atg tct aac caa caa 192
171 Lys Gln Asp Leu Met Ser Thr Val Leu Thr Met Met Ser Asn Gln Gln
172 50 55 60
174 caa tat tta tta gaa tct cac gaa tat ggt gat atg aat ggc gac agt 240
175 Gln Tyr Leu Leu Glu Ser His Glu Tyr Gly Asp Met Asn Gly Asp Ser
176 65 70 75 80
178 ggt gta tta tcc gga gac ttt aaa tta caa cta atg att atc gaa act 288
179 Gly Val Leu Ser Gly Asp Phe Lys Leu Gln Leu Met Ile Ile Glu Thr
180 85 90 95
182 gat tta gag cgt ctc aac tat att gtt cga tta tac ata cga act cga 336
183 Asp Leu Glu Arg Leu Asn Tyr Ile Val Arg Leu Tyr Ile Arg Thr Arg
184 100 105 110

```

RAW SEQUENCE LISTING

DATE: 12/04/2002

PATENT APPLICATION: US/09/980,054A

TIME: 10:27:05

Input Set : A:\19624051.app

Output Set: N:\CRF4\12032002\I980054A.raw

```

186 ttg agt aag ttg aat aaa ttt act att ttt tac atc aat gaa agc agt 384
187 Leu Ser Lys Leu Asn Lys Phe Thr Ile Phe Tyr Ile Asn Glu Ser Ser
188      115      120      125
190 caa aat gat aat tta ttg tcc aaa gag gaa aga gat tat ata cac aaa 432
191 Gln Asn Asp Asn Leu Leu Ser Lys Glu Glu Arg Asp Tyr Ile His Lys
192      130      135      140
194 tat ttc cag att ttg act caa tta tat aac aac tgt ttc ctc aaa aaa 480
195 Tyr Phe Gln Ile Leu Thr Gln Leu Tyr Asn Asn Cys Phe Leu Lys Lys
196 145      150      155      160
198 cta cca caa atg ttg acc tat ttg gat gac acc agt ggt gga caa tca 528
199 Leu Pro Gln Met Leu Thr Tyr Leu Asp Asp Thr Ser Gly Gly Gln Ser
200      165      170      175
202 atg atc gtt gag cca gat tta gac cag cct gtg ttt atc aaa tgt acc 576
203 Met Ile Val Glu Pro Asp Leu Asp Gln Pro Val Phe Ile Lys Cys Thr
204      180      185      190
206 ctg gaa gtc cca ata tta cta gat tac gac ggt gct aca gag ata gat 624
207 Leu Glu Val Pro Ile Leu Leu Asp Tyr Asp Gly Ala Thr Glu Ile Asp
208      195      200      205
210 tta gaa tta ata aaa aag gga gtc tac gtg gtg aaa tac agc cta gtc 672
211 Leu Glu Leu Ile Lys Lys Gly Val Tyr Val Val Lys Tyr Ser Leu Val
212      210      215      220
214 aaa aga tat att gat att gga gat gtg gta ttg ata tga 711
215 Lys Arg Tyr Ile Asp Ile Gly Asp Val Val Leu Ile
216 225      230      235
219 <210> SEQ ID NO: 4
220 <211> LENGTH: 236
221 <212> TYPE: PRT
222 <213> ORGANISM: Candida albicans
224 <400> SEQUENCE: 4
225 Met Asp Ile Asp Asp Ile Leu Lys Glu Phe Glu Glu Ser Ser Lys Asp
226 1      5      10      15
227 Glu Lys Ile Ser Ser Lys Thr Ser Ser Ile Asn Leu Tyr Gln Asp Leu
228      20      25      30
229 Leu Arg Ala Met Ile Asn Glu Arg Met Ala Pro Glu Leu Leu Pro Tyr
230      35      40      45
231 Lys Gln Asp Leu Met Ser Thr Val Leu Thr Met Met Ser Asn Gln Gln
232      50      55      60
233 Gln Tyr Leu Leu Glu Ser His Glu Tyr Gly Asp Met Asn Gly Asp Ser
234 65      70      75      80
235 Gly Val Leu Ser Gly Asp Phe Lys Leu Gln Leu Met Ile Ile Glu Thr
236      85      90      95
237 Asp Leu Glu Arg Leu Asn Tyr Ile Val Arg Leu Tyr Ile Arg Thr Arg
238      100      105      110
239 Leu Ser Lys Leu Asn Lys Phe Thr Ile Phe Tyr Ile Asn Glu Ser Ser
240      115      120      125
241 Gln Asn Asp Asn Leu Leu Ser Lys Glu Glu Arg Asp Tyr Ile His Lys
242      130      135      140
243 Tyr Phe Gln Ile Leu Thr Gln Leu Tyr Asn Asn Cys Phe Leu Lys Lys
244 145      150      155      160

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/980,054A

DATE: 12/04/2002

TIME: 10:27:05

Input Set : A:\19624051.app

Output Set: N:\CRF4\12032002\I980054A.raw

```

245 Leu Pro Gln Met Leu Thr Tyr Leu Asp Asp Thr Ser Gly Gly Gln Ser
246                               165 170 175
247 Met Ile Val Glu Pro Asp Leu Asp Gln Pro Val Phe Ile Lys Cys Thr
248                               180 185 190
249 Leu Glu Val Pro Ile Leu Leu Asp Tyr Asp Gly Ala Thr Glu Ile Asp
250                               195 200 205
251 Leu Glu Leu Ile Lys Lys Gly Val Tyr Val Val Lys Tyr Ser Leu Val
252                               210 215 220
253 Lys Arg Tyr Ile Asp Ile Gly Asp Val Val Leu Ile
254 225                               230 235
258 <210> SEQ ID NO: 5
259 <211> LENGTH: 1383
260 <212> TYPE: DNA
261 <213> ORGANISM: Candida albicans
263 <220> FEATURE:
264 <221> NAME/KEY: CDS
265 <222> LOCATION: (1)..(1383)
267 <400> SEQUENCE: 5
268 atg gat ttc ata gga gag att ata gag cat gag aca gag gca cct aaa 48
269 Met Asp Phe Ile Gly Glu Ile Ile Glu His Glu Thr Glu Ala Pro Lys
270 1 5 10 15
272 gaa cca acc cca aaa ccc aca att ggt gga ttc ccc gaa ctt aaa aaa 96
273 Glu Pro Thr Pro Lys Pro Thr Ile Gly Gly Phe Pro Glu Leu Lys Lys
274 20 25 30
276 tta aaa gaa aag aaa gtc tca aga tgg agg caa aag caa caa cag gaa 144
277 Leu Lys Glu Lys Lys Val Ser Arg Trp Arg Gln Lys Gln Gln Glu
278 35 40 45
280 cag agc aca act tcc cca aaa act act gaa atc cgt tca gag gct tcc 192
281 Gln Ser Thr Thr Ser Pro Lys Thr Thr Glu Ile Arg Ser Glu Ala Ser
282 50 55 60
284 aaa att cac caa gaa aat atc gag aag atg gct caa atg tca gag gaa 240
285 Lys Ile His Gln Glu Asn Ile Glu Lys Met Ala Gln Met Ser Glu Glu
286 65 70 75 80
288 gag att ttg caa gag cgt gag gag tta cta aag ggt tta gat cct aaa 288
289 Glu Ile Leu Gln Glu Arg Glu Glu Leu Leu Lys Gly Leu Asp Pro Lys
290 85 90 95
292 tta att gaa agt ttg att ggt aga tcc aag aaa agg gaa gca aca gac 336
293 Leu Ile Glu Ser Leu Ile Gly Arg Ser Lys Lys Arg Glu Ala Thr Asp
294 100 105 110
296 cat gaa cac aat gga cat gct cat gaa cat gca gag gga tac cat gga 384
297 His Glu His Asn Gly His Ala His Glu His Ala Glu Gly Tyr His Gly
298 115 120 125
300 tgg att gga tca atg aaa act tct gaa gga tta aca gat tta tct caa 432
301 Trp Ile Gly Ser Met Lys Thr Ser Glu Gly Leu Thr Asp Leu Ser Gln
302 130 135 140
304 tta gat aag gaa gat gtg gac cgt gca ttg ggt ata agt tca tta tcc 480
305 Leu Asp Lys Glu Asp Val Asp Arg Ala Leu Gly Ile Ser Ser Leu Ser
306 145 150 155 160
308 tta tct gaa cct gag ggt ggc agt aat acg aaa aaa gtc gct ttc gac 528

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/980,054A

DATE: 12/04/2002
TIME: 10:27:06

Input Set : A:\19624051.app
Output Set: N:\CRF4\12032002\I980054A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:21; N Pos. 18

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/980,054A

DATE: 12/04/2002

TIME: 10:27:06

Input Set : A:\19624051.app

Output Set: N:\CRF4\12032002\I980054A.raw

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:1308 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0